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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,276	05/21/2007	Robert Cudini	CUDI3001 /FJD	4085
23364 7590 09/07/2010 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176			EXAMINER DEVITO, ALEX T	
			ART UNIT 2856	PAPER NUMBER
			MAIL DATE 09/07/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,276	<b>Applicant(s)</b> CUDINI ET AL.	
	<b>Examiner</b> ALEX DEVITO	<b>Art Unit</b> 2856	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This Office Action is in response to the Applicant's communication filed on July 12, 2010. In virtue of this amendment claims 16-31 are now presented in the instant application.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 16-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer (U.S. Patent No. 6,539,819) in view of Olsson (U.S. Patent No. 5,370,557).

With respect to Claim 16, Dreyer discloses a modular measuring device, comprising: a sensor module [2] having a sensor compartment [5], in which a physical-to-electrical sensor [7] is arranged (see column 2, line 62 - column 3, line 10; an electronics module [13], having an electronics compartment [14], in which a measuring

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device electronics [16] is arranged; a first connecting element [19] mounted on said electronics module and electrically connected with said measuring device electronics (column 3, lines 40-51); and a second connecting element [15] mounted on said sensor module and electrically connected with said sensor (column 3, lines 40-51); and a seal [33] wherein: said sensor module and said electronics module are releasably, mechanically connected together, accompanied by the formation of a connecting compartment lying between said sensor compartment and said electronics compartment (column 2, lines 31-39 and column 3 lines 40-61), said two connecting elements are electrically, connected together, so that said measuring device electronics and said sensor are electrically coupled together (column 3, lines 40-43); and said two connecting elements, connected together, are accommodated in the connecting compartment [13] formed between said sensor compartment and said electronics compartment (note that in figure 1, 13 is between 5 and 14, the sensor compartment and the electronics compartments) said seal is so arranged in said connecting compartment, that it laterally surrounds at least one of said two connecting elements (33 surrounds 19, see Dreyer figure 1) and contacts with an external side at least one side wall of said connecting compartment (see figure 1 and Dreyer column 3, lines 52-61).

Dreyer does not disclose a modular measuring device with at least one side wall of at least one of said two connecting elements has at least one essentially straight groove and at least one side wall of said connecting compartment has at least one, essentially straight projection corresponding with said groove of said connecting element; and the projection of said connecting compartment is received by said groove

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of said connecting element and/or with at least one side wall of at least one of said two connecting elements has at least one essentially straight projection and at least one side wall of said connecting compartment has an essentially straight groove corresponding with the projection of said connecting element; and the projection of said connecting element is received by the groove of said connecting compartment.

Olsson discloses a modular measuring device with at least one side wall of at least one of said two connecting elements has at least one essentially straight groove and at least one side wall of said connecting compartment has at least one, essentially straight projection [106] corresponding with said groove (see figure 13 for the space occupied by 106s) of said connecting element; and the projection of said connecting compartment is received by said groove of said connecting element (columns 3 and 4) and/or with at least one side wall of at least one of said two connecting elements has at least one essentially straight projection (106) and at least one side wall of said connecting compartment has an essentially straight groove (space occupied by 106) corresponding with the projection of said connecting element; and the projection of said connecting element is received by the groove of said connecting compartment (columns 3 and 4).

Since Olsson uses these projections and grooves to fit together two connecting elements in a modular measuring device (see column 1, lines 10-15), it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the modular measuring device of Dreyer by fitting the connecting elements with projections

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and grooves as taught by Olsson to uniquely couple mating elements (see Olsson's abstract).

With respect to Claim 17, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 16 wherein: at least one of said two connecting elements is movably mounted (see Dreyer, column 2, lines 31-39).

With respect to Claim 18, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 16 wherein: said two connecting elements are galvanically connected together. Note that barring any specific definition of galvanic connection in the specification, the examiner is broadly interpreting the conducting connection to be galvanic.

With respect to Claim 19, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 16 wherein: the connecting compartment is sealed fluid-tightly and/or pressure-tightly, relative to a surrounding atmosphere (see Dreyer, column 2, lines 18-30).

With respect to Claim 20, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 16 wherein: at least one of said two connecting elements has electrically conductive, plug elements (Olsson, figure 1) directed essentially in parallel with one another (see Olsson, Figure 1); and the other of said two connecting elements has electrically conductive, socket elements ( Olsson, note openings 80 of which the parallel plug elements are inserted) directed essentially in parallel with one another and corresponding to said plug elements; said plug elements are inserted into said socket elements and so contact said socket elements, that said

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sensor and said measuring device electronics are electrically connected together (see Olsson, column 1, lines 45-53); and said plug elements and said socket elements are directed essentially in parallel with said at least one groove of said connecting compartment and/or with the at least one projection of said connecting compartment (see Olsson's figure 1).

With respect to Claim 21, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 20 wherein: the combination of Dreyer and Olsson disclose all the claimed limitations of claim 20 above and also disclose that both said plug elements and said socket elements protrude into said connecting compartment (16 of Olsson's figure 1 is a connecting compartment).

With respect to claim 22, the combination of Dreyer and Olsson disclose all the claimed limitations of claim 20 above and also disclose that at least one of said plug elements and/or at least one of said socket elements is mounted laterally and/or rotatably movably within said connecting element of which it is a part (see Olsson, figure 1 for lateral mounting).

With respect to claim 23, the combination of Dreyer and Olsson disclose all the claimed limitations of claim 18 above and also disclose for preventing an erroneous assembly of said sensor module and said electronics module, the at least one projection of said connecting compartment and said connecting element groove corresponding with such are so arranged, that an installed position of said sensor module relative to said electronics module is uniquely determined (see Olsson's abstract).

With respect to claim 24, the combination of Dreyer and Olsson disclose all the claimed limitations of claim 18 above and also disclose for preventing an erroneous assembly of said sensor module and said electronics module, the at least one groove of said connecting compartment and said connecting element projection corresponding with such are so arranged, that an installed position of said sensor module relative to said electronics module is uniquely determined (see Olsson's abstract).

With respect to claim 25, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 16, wherein: said seal is essentially ring-shaped [33].

With respect to claim 26, Dreyer discloses the measuring device as claimed in claim 25 wherein: said seal [33] is arranged coaxially, especially concentrically, with the surrounded connecting element (column 3, lines 52-61).

With respect to claim 27, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 25 wherein: said seal [33] is arranged within said connecting compartment [17] in the region of a peripheral gap in the side wall of said connecting compartment, and lying between said connecting element [19] and side wall of said connecting compartment [17] (see Dreyer, column 3, lines 50-51).

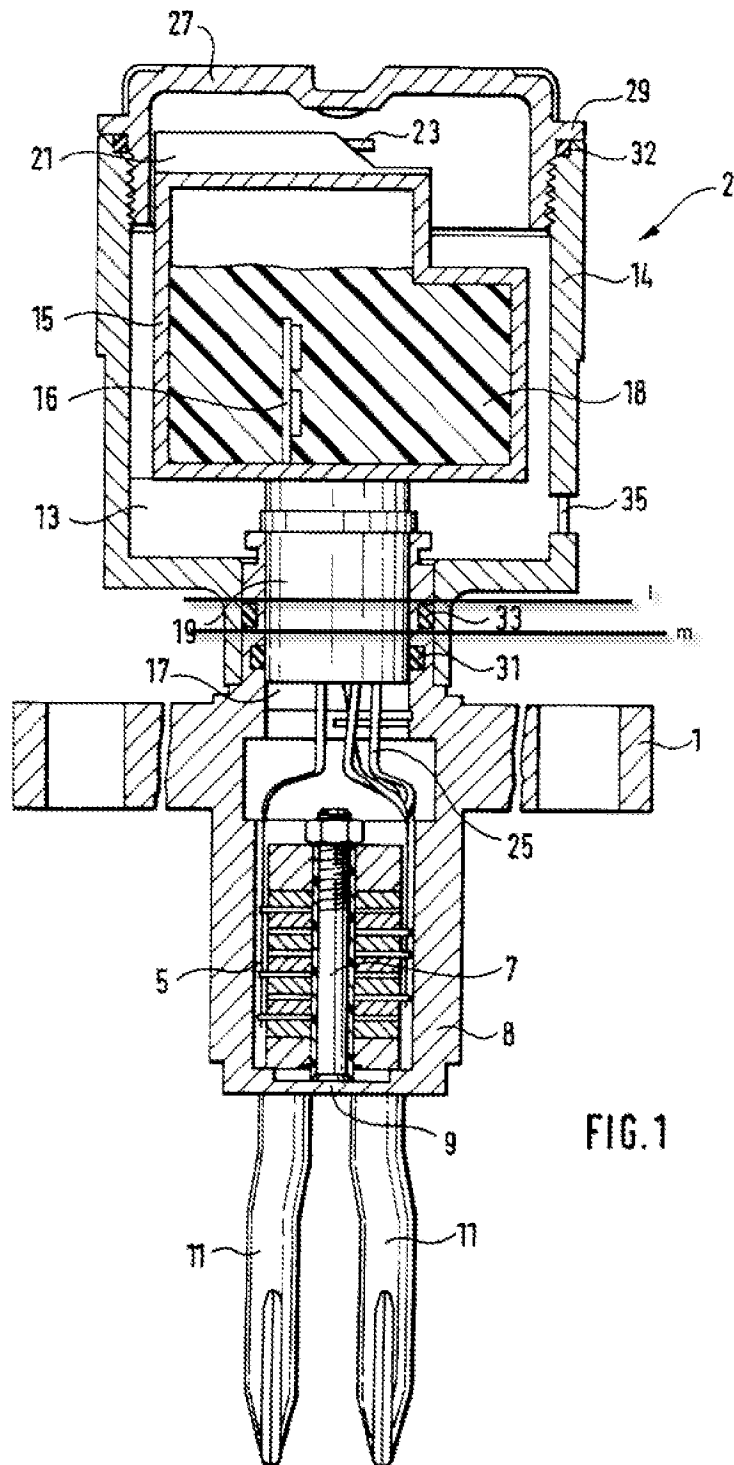
With respect to claim 28, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 25 wherein: said seal [33] has on its outside, contacting the side wall of said connecting compartment, two sealing lips extending essentially in parallel with one another (see annotated Dreyer's figure 1 below).



With respect to claim 29, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 27 wherein: said seal [33] is so arranged in said connecting compartment that the two sealing lips extend essentially in parallel with said gap in the side wall of said connecting compartment (see annotated Dreyer's figure 1 below and column 3, lines 52-61).

With respect to claim 30, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 29 wherein: said seal [33] is so arranged in said connecting compartment that said gap in the side wall of said connecting compartment extends essentially between the sealing lips of the seal (see annotated Dreyer's figure 1 below and column 3, lines 52-61).

With respect to claim 31, the combination of Dreyer and Olsson disclose the measuring device as claimed in claim 26 wherein: said seal is arranged concentrically with the surrounded connecting element (see Dreyer's figure 1 to see 33 concentrically surround connecting element 19).



Note sealing lips touching lines l and m are parallel.

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3. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dreyer (U.S. Patent No. 6,539,819) and Olsson (U.S. Patent No. 5,370,557), in further view of Steinhauser et al (U.S. Patent No. 5,692,681, hereinafter Stein).

With respect to Claim 16, Dreyer discloses a modular measuring device, comprising: a sensor module [2] having a sensor compartment [5], in which a physical-to-electrical sensor [7] is arranged (see column 2, line 62 - column 3, line 10; an electronics module [13], having an electronics compartment [14], in which a measuring device electronics [16] is arranged; a first connecting element [19] mounted on said electronics module and electrically connected with said measuring device electronics (column 3, lines 40-51); and a second connecting element [15] mounted on said sensor module and electrically connected with said sensor (column 3, lines 40-51); and a seal [33] wherein: said sensor module and said electronics module are releasably, mechanically connected together, accompanied by the formation of a connecting compartment lying between said sensor compartment and said electronics compartment (column 2, lines 31-39 and column 3 lines 40-61), said two connecting elements are electrically, connected together, so that said measuring device electronics and said sensor are electrically coupled together (column 3, lines 40-43); and said two connecting elements, connected together, are accommodated in the connecting compartment [13] formed between said sensor compartment and said electronics compartment (note that in figure 1, 13 is between 5 and 14, the sensor compartment and the electronics compartments).

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Dreyer does not disclose a modular measuring device with at least one side wall of at least one of said two connecting elements has at least one essentially straight groove and at least one side wall of said connecting compartment has at least one, essentially straight projection corresponding with said groove of said connecting element; and the projection of said connecting compartment is received by said groove of said connecting element and/or with at least one side wall of at least one of said two connecting elements has at least one essentially straight projection and at least one side wall of said connecting compartment has an essentially straight groove corresponding with the projection of said connecting element; and the projection of said connecting element is received by the groove of said connecting compartment.

Olsson discloses a modular measuring device with at least one side wall of at least one of said two connecting elements has at least one essentially straight groove and at least one side wall of said connecting compartment has at least one, essentially straight projection [106] corresponding with said groove (see figure 13 for the space occupied by 106s) of said connecting element; and the projection of said connecting compartment is received by said groove of said connecting element (columns 3 and 4) and/or with at least one side wall of at least one of said two connecting elements has at least one essentially straight projection (106) and at least one side wall of said connecting compartment has an essentially straight groove (space occupied by 106) corresponding with the projection of said connecting element; and the projection of said connecting element is received by the groove of said connecting compartment (columns 3 and 4).

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Since Olsson uses these projections and grooves to fit together two connecting elements in a modular measuring device (see column 1, lines 10-15), it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the modular measuring device of Dreyer by fitting the connecting elements with projections and grooves as taught by Olsson to uniquely couple mating elements (see Olsson's abstract).

Olsen however, does not disclose a seal that is arranged in said connecting compartment, that it laterally surrounds at least one of said two connecting elements and contacts with an external side at least one side wall of said connecting compartment.

Stein discloses a similar electrical connector to Olsen, but instead of remaining silent on the sealing methods, explicitly discloses a seal that is arranged in said connecting compartment, that it laterally surrounds at least one of said two connecting elements and contacts with an external side at least one side wall of said connecting compartment (note figure 4, seal 25 and column 2, lines 39-48). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the sealing of Stein in place of the sealing in Olsen as both electrical connectors are very similar and both need to be sealed.

### ***Response to Arguments***

4. Applicant's arguments filed 7/12/10 have been fully considered but they are not persuasive. However, if the applicant remains unconvinced that the seal from Dreyer, when combined with Olsen, would result in the claimed invention, then the examiner

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puts forth a rejection that modifies the seal of Olsen to be explicitly identical to the claimed seal.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX DEVITO whose telephone number is (571)270-7551. The examiner can normally be reached on flex.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 5712722208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALEX DEVITO/

/Hezron Williams/

Examiner, Art Unit 2856

Supervisory Patent Examiner, Art Unit 2856